

OPORTUNITIES FOR THE NATURAL AND CULTURAL HERITAGE CONSERVATION IN SURDESTI VILLAGE, MARAMURES COUNTY

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Abstract:

The present paper presents the results of the research started in the frame of the project called „Dig Where You Live” (2005-2007). It has been developed as a partnership between The Social-Cultural Foundation for Democracy „I.U.G.A.”, the Sisesti Guildhall and North University of Baia Mare.

The data required by the "Questionnaire Sheet" provided information on the area of land that belongs to the villagers, the land use, the most used fertilizers, the agricultural machineries that are owned by the local farmers, the animals that provide for the farms, the storages and use of households waste, the tenacity of their house and annexes, crafts that they still practice, local farming habits etc.

Each year the starting of the plough and the ritual of the tilling of the soil in Surdesti marks the beginning of a new phase in the rural agrarian cycle. Old farmers remember that before collectivization, the hayfields were often fertilized by using the mobile fold technique.

Factual material that was discovered in Surdesti village points that the agriculture that is practiced here is not intended primarily to cope with competitive pressure and market force in the European Union.

In terms of environmental factors, soil tests, water courses and underground water tests show that Surdesti village is an unpolluted area, suitable for ecological agriculture and eco-tourism. Nowadays, farmers need agricultural practice and good examples of correct and timely information.

INTRODUCTION

Surdesti is a village well known throughout the world through the wooden church with a tower of 54 m high. This place of worship was built in 1721 and is widely recognized as a top achievement of craftsmen-artists of Maramures. [1]

Also, priest Vasile Lucaciu (1852-1922), by his deeds of sacrifice, he lived a holy life for the better of the Romanians in Transylvania, but especially for those in the village area of Sisesti, he remained firmly rooted in the memory of all people of Maramures villages. Locals remember especially the great contribution of the land reform enacted in 1921. Knowing the precarious situation of the inhabitants of villages in the area, which often has instructed including on farm work, proposed and managed the construction of a village for the people in need, village called Fisculas, but the newly build village adopted the name of Lucacieni in the honour of its founder. [5]

The current socio-economic situation calls to reinvigorate the community and to promote the unique cultural values that have been built up over time and, also,

the exploitation of its natural resources, livestock and fruit growing, the last two being the main occupations of the inhabitants of the village Surdesti, in the conditions of the market economy and private property restitution.

PLACE OF RESEARCH

Surdesti is a hilly village comprising the village Sisesti, Maramures County. It lies 21 km east-south-east of Baia Mare and 10 km west of Cavnic, both being traditional mining towns. The settlement has about 400 households, spread out over a large area of land, about 1126 ha.



Fig. no. 1. Preparing for Research

MATERIALS AND METHODS

Research in this famous area was initiated within the "Dig Where You Live" (2005-2007) programme, a project developed in partnership by the Social-Cultural Foundation for Democracy "I.U.G.A.", the Sisesti Guildhall and The North University of Baia Mare. Since then, our research continued by contributing to the consolidation of the database "Information Center on Maramures Rural Heritage" (Surdesti, Pe Pusta, no. 310 / A) and by the development of the Surdesti village. [4]

The main objective of the project was to develop a strategy for preservation and development of full cultural and natural heritage of the village.

After the information and the acceptance phases for the village, in 2005 we have made a survey of the natural heritage, working in stages, with research teams specialized in the fields of agriculture, environmental protection and cultural heritage. Data collection campaign was resumed in 2010 - 2011.

The fieldwork for the data collection was performed by students and graduates of the University of North Baia Mare, the field personally used "questionnaire sheets", completed by the information received from the locals, especially from the old and wise. Of the 437 households there have been investigated around 40% (174 households). Recorded data includes information on the area of land they hold, the use of land, if and what type of fertilizers they use, the agricultural machinery that they own, the owned farm animals, the collection, storage and use of manure and household waste, year of construction of the houses and annexes, crafts that they have learned in the family and still practice, agricultural habits, etc.



Fig. no. 2. Field Work

During the fieldwork the citizens have expressed their concerns about environmental pollution in their community and, as a result, there have been conducted a set of physical-chemical analysis of the household that hosted the project. These tests included surface water rate on the Racos stream, the analyse of the drinking water from the host household fountain and a sample of pasture land.

RESULTS. DISCUSSION

Villagers link their agricultural traditions and work habits to tradition, rarely looking for advice from specialists in agriculture. The beginning of the plow working, the pulling of the first furrows and the "drawing in water, for fertility" are marked the "Udatoriul" feast and hay work is the rythmed by "The Story of Hay". [3]

There is a posting to practice agriculture based strictly on scientific evidence (documented and intensive agriculture), the farmers being concerned in particular on the pollution problem (Pollution is not perceived individually, depending on the source, but is seen as a whole, consisting of various practices and chemicals harmful to health. From this point of view is presented as an enemy pollution invisible but extremely dangerous to the health and prosperity of the village. From this point of view, people perceived pollution differs from scientific term - the term is more "curpinzator"). Evidence of a clean natural environment or a polluted one is given by the results of the analysis carried out at least for soil and water environmental factors, in accordance with the laws in force. [7, 8]

Thus, in accordance with *Order 161/2006 - Elements and quality standards of biological, chemical and physico-chemical to determine the ecological status of surface water*, stream Racos can be placed in grade I, with the recommendation that the phosphorus indicator is to be monitored periodically, but the recorded instantaneous values can also be interpreted as an increased activity of algae in the warmer periods of the year. (Table no. 1)

Table no. 1 Water Quality Indicators for Parau Racosa – Surdesti

Quality indicator	U/M	Quality class					Determined values
		I	II	III	IV	V	
C.1. Temperature and acidification regime							
pH		6,5 – 8,5					7,30 - cls. I
C.2. Oxygen Regime							
CCO-Mn	mg O ₂ /l	5	10	20	50	>50	3,04- cls. I
C.3. Nutrients							
Ammonium (N-NH ₄ ⁺)	mg N/l	0,4	0,8	1,2	3,2	>3,2	0,064 - cls. I
(N-NO ₂ ⁻)	mg N/l	0,01	0,03	0,06	0,3	>0,3	0,003- cls. I
(N-NO ₃ ⁻)	mg N/l	1	3	5,6	11,2	>11,2	0,357- cls. I
Soluble orthophosphates (P-PO ₄ ³⁻)	mg P/l	0,1	0,2	0,4	0,19	>0,19	0,043- cls. I
Total phosphorus (P)	mg P/l	0,015	0,04	0,075	1,2	>1,2	0,062- cls. II
C.4. Salinity							
Filterable residue dried at 105 ° C	mg/l	500	750	1000	1300	>1300	385- cls. I
Chloride (Cl ⁻)	mg/l	25	50	250	300	>300	11,36- cls. I
Sulphates (SO ₄ ²⁺)	mg/l	60	120	250	300	>300	14,15- cls. I
Calcium (Ca ²⁺)	mg/l	50	100	200	300	>300	42,45- cls. I

In accordance with the *Law nr.458/200 on Law nr.311/2004 – The Drinking Water Act*, there is also noted that the groundwater quality indicators for the Surdesti village generally fall in the normal values. A minor deviation is recorded for acidification regime, possibly on a natural background, but this matter has been too little studied (only by judging on value recorded for soil pH). (Table 2.)

Table no. 2. Water Quality Indicators for Fountain Şurdesti, no. 310A

Quality indicators	U/M	Maximum admitted concentration	Determined values
pH	pH unities	6,5 – 9,5	6.31
CCO-Mn	mg O ₂ /l	max.5	0.64
Ammonium	mg NH ₄ ⁺ /l	0,50	0.115
Nitrates	mg NO ₂ ⁻ /l	0,50	<0.01
NO ₃ -Nitrogen	mg NO ₃ ⁻ /l	50	2.512
Conductivity	µS/cm	2500	367
Total roughness	° germane	min.5	10.64
Chlorides	mg Cl ⁻ /l	250	44.02
Sulphates	mg/ SO ₄ ²⁺ l	250	30.32
Calcium	mg Ca ²⁺ /l	undetermined	49.66
Bicarbonate	mg/l	undetermined	109.8

In accordance with the indicators set out in the ICPA Methodology and in the literature [6] for soil, environmental factor are found to fit the normal values for land in the area. (Table no. 3)

Table no. 3. Quality Indicators for Soil-Şurdesti

Quality indicators	U/M	Determined values	Type
pH _{H₂O}	Unit. pH	5,83	low acid character
N total	%	0,136	low to medium content
P total	mg /kg s.u.	95,7	very good content - field crops, natural pastures hilly area
Humus	%	1,137	low to medium content for fine and medium textured soil

It should be noted that most farmers said they used as fertilizer for fertilizing only manure that is stored and looked up until "pumpkins grow on it."

Also, the fertilization technique used for less productive land is "polochimul", the farmers dig it up from certain places and they lay it in a 15-20 cm thick layer on a surface that has previously been well cleared of thorns and bushes.

The old and wise remember that before the collectivization, they used on their hay fields and on their productive land a fertilization technique called the "mobile fold". This technique was suitable for newly cleared land; the land being used mainly as pasture for spring and autumn for the prevention of the reforestation (the cattle fertilize and clear the land spontaneously, enriching the soil composition). Often the forests have been an ideal space for winter grazing of sheep and imperceptibly expanding the meadows. This technique has now resumed due to massive deforestation, but has a sporadic application, without a long-term purpose.



Fig. no. 3. The Way of Hay

CONCLUSIONS

- The factual material that has been found and researched in the Surdesti village proves once again that the agriculture practiced in the village is not aimed primarily for a maximum efficiency (efficiency that is reached by the level of production from the Western Europe).
- The area has no agricultural associations and, for the moment, cannot foresee the advantages offered by this type of agricultural organization. It's hard to convince landowners that the agricultural associations are possible and that the agricultural associations can be well managed (This is due to the collectivization that took place during the communist era, due to this practice, landowners no longer have confidence in a possible joint management of land, was reluctant even query made by students when they were asked to about the surface of land owned).
- In terms of environmental quality, the analysis of soil, drinking water and water streams show that the area is environmentally friendly, suitable for high nature value farming systems and eco-tourism.
- At present, farmers need agricultural practice examples and correct information in a timely manner. We believe that education, information and permanent revival of agricultural practices is desired by farmers and is a prerequisite for ensuring a decent standard of living.

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